ESSENTIAL BASIC TRAUMA FACILITY CRITERIA DEFINED

A Basic (Level IV) Trauma Facility provides resuscitation, stabilization and arranges for appropriate transfer of all patients with major and severe injuries to a higher level trauma facility. The purpose of this document is to clarify what is required to fulfill each of the **essential** criterion included in the Texas Trauma Facility Criteria - Basic (each essential criterion is listed and followed by an explanatory statement in italics). It is hoped that these clarifications will assist hospital representatives in working to prepare their facility for Level IV designation.

1. Emergency Room

The emergency room staff should ensure immediate and appropriate care for the trauma patient. The emergency room physician should function as a designated member of the trauma team and the relationship between emergency room physicians and other participants of the trauma team must be established on an individual hospital basis, consistent with resources but adhering to established standards that ensure optimal care.

a. Personnel

1) Designated physician director

An identified medical staff role assumed by a hospital-credentialed physician. Functions of this position may include: trauma patient care, development of written protocols, credentialing of medical staff who provide trauma care, continuing education programs, oversight of continuing education of physicians providing trauma care, quality improvement (QI) activities related to trauma, participation in regional trauma system planning, and support of public education programs. This physician should work very closely with the trauma nurse coordinator in preparing for designation and maintaining standards of care.

2) Trauma team composition is based on historical volume and acuity data

A trauma team is a group of health care professionals organized to provide care to the trauma patient in a coordinated and timely fashion. Identification of the trauma team members should be based on previously documented injury severity criteria and patient flow.

b. Written protocols for:

1) Trauma team activation

The trauma team activation protocol should define who may activate the team, when

the team is called (based on established injury severity criteria), and expected response times of team members.

2) Identification of trauma team responsibilities during a resuscitation

The roles of each trauma team member during the initial assessment and emergent care of the trauma patient, should be outlined. This information may be developed as a separate protocol, or may be included in the Trauma Team Activation Protocol.

3) Admission and transfer

Admission and transfer protocols should describe the process for admission of a patient as a hospital inpatient, and the process for preparation and movement of a patient to another trauma facility for definitive, or tertiary care. All existing state and federal laws related to patient transfers continue to be applicable (e.g. COBRA).

c. A written plan for acquisition of additional staff on a 24 hour basis to support units with increased patient acuity, multiple emergency procedures and admissions (such as a written disaster plan)

The hospital disaster plan may be used to fulfill this criteria. The plan should be functional and appropriate. During the site survey questions will probably be asked about the hospital's participation in disaster drills (facility-wide, local, and/or regional).

d. Equipment for resuscitation and to provide life support for the critically or seriously injured shall include but not be limited to:

The following equipment should be functional and readily available at the bedside in the emergency room.

1) Airway control and ventilation equipment such as laryngoscopes and endotracheal tubes of all sizes, bag/mask resuscitator, pocket masks and oxygen

Oxygen masks, nasal cannulas, bag-valve-masks, laryngoscopes, endotracheal tubes, Magill forceps, and endotracheal tube stylets in sizes for all ages (from neonates to large adults) should be included.

3) Suction devices

Standard mechanical suction devices such as a wall suction or a portable mechanical suction should be available.

4) Electrocardiograph - oscilloscope - defibrillator

An electronic monitoring device with the capability to monitor heart rate and a

defibrillator equipped with pediatric and adult paddles should be available.

5) All standard intravenous fluids and administration devices, including intravenous catheters and rapid infusion devices

Intravenous fluids (including normal saline, lactated ringers solution and lactated ringers solution with dextrose), intravenous infusion catheters (14 gauge - 24 gauge), intraosseous cannulas and a blood pump should be easily accessible.

6) Sterile surgical sets for procedures standard for the emergency room, such as thoracostomy, venesection, diagnostic peritoneal lavage, cricothyroidotomy, etc.

Thoracostomy, venesection, diagnostic peritoneal lavage, and cricothyroidotomy trays should be available along with written procedures for these activities. Other types of trays identified by hospital staff may also be utilized, but also require documented procedures.

7) Gastric lavage equipment

Vented nasogastric tubes (in sizes for all ages) and catheter tip syringes should be available.

8) Stabilization devices for cervical injuries

Backboards, stiff cervical immobilization collars, head immobilizers, towel rolls or 1000cc IV solution bags along with wide adhesive tape and child safety seats are all acceptable cervical stabilization devices.

9) Stabilization devices for long bones

Splints, armboards, pillows, gauze dressing material (such as kling), triangular bandages or similar equipment are all acceptable. A device for traction splinting (such as a Hare traction splint) sized to fit pediatric and adult patients should also be available.

10) Thermal control equipment

a) for patient

A mechanical patient warming device (such as a K-pad, or warming lamp) is the preferred equipment for patient warming. Blankets, preferably warmed blankets, are also acceptable. The blanket warmer may be located outside the emergency room as long as it is readily accessible to the emergency room staff at all times.

b) a warming device for blood and fluids

A mechanical blood warming apparatus is preferred equipment in the warming of intravenous solutions and blood products during infusion. A tubing coil and warm water bath will meet this criteria, as long as the process is monitored through the QI program. Storage of blood warming equipment outside the emergency room is acceptable as long as it is readily accessible to the emergency room staff at all times.

12) Non-invasive continuous blood pressure monitoring device

A mechanical blood pressure monitoring apparatus, capable of continuous monitoring, will meet this criteria. Storage of this equipment outside the emergency room is acceptable as long as it is immediately accessible to the emergency room staff.

e. Other

1) Radiological Services

a) Technician on-call and promptly available within thirty minutes of request

Consideration should be given to inclusion of the radiology technician as a trauma team member. On-call response times should be monitored through the QI program.

2) Clinical Laboratory Services
(available 24 hours a day)

a) Standard analyses of blood, urine and other body fluids

Laboratory tests such as CBC and blood chemistries, urinalysis, stool and gastric guiac should be available.

b) Blood typing and cross-matching

The laboratory should have the capability of performing type and cross-match procedures and a procedure in place to release uncrossmatched blood.

c) Coagulation studies

Coagulation studies such as prothrombin time (PT) and partial thromboplastin time (PTT) should be available.

d) Comprehensive blood bank or access to a community central blood bank and adequate hospital storage facilities

Immediate access to an adequate supply of blood products should be maintained by the laboratory, and a plan should exist for procurement of additional blood products as necessary. (The definition of "adequate" should be determined by the historical data of the facility.

e) Blood gases and Ph determinations

The capability to perform analyses of arterial/venous blood to ascertain gas and Ph values should exist.

3) Two-way communication with prehospital emergency medical services vehicles

The ability to communicate with ambulances transporting patients to the hospital must be maintained. This criteria may be accomplished by utilizing a telephone, cellular telephone, radio or other device.

2. Physician Services

a. General Surgery Services

1) If general surgery services are provided by the facility, the surgeon on-call will be immediately advised and will be available in-house within thirty minutes of request (this capability should be monitored in the quality improvement program)

*General surgery services are **not** required in a Basic Trauma Facility. If on-call general surgery services are available for trauma, the timing identified in the criteria must be met and monitored in the QI program.*

b. Non-Surgical Specialty Services
On-call and promptly available from inside or outside the hospital:

1) Anesthesiology - requirements may be fulfilled by a member of the anesthesia care team credentialed in assessing emergent situations in trauma patients and providing any indicated treatment

*Anesthesiology services are **not** required in a Basic Trauma Facility. If on-call general surgery services are available for trauma, the timing identified in the criteria must be met and monitored in the QI program.*

2) Emergency Medicine - this requirement may be fulfilled by a physician credentialed by the hospital to provide emergency medical services

This criteria includes all physicians who provide medical coverage in the emergency room. The hospital should have in place a mechanism for credentialing medical staff who work in the emergency room.

a) At least one staff physician is credentialed in ATLS or an equivalent course approved by the Texas Department of Health (TDH) within 6 months of the date of designation

ATLS is currently the only TDH approved trauma care course for physicians. The physician holding this credential should be active in providing emergency room coverage. Completion of the course by a physician staff member up to six months after designation fulfills this criteria.

b) Any physician providing this coverage should be credentialed in ATLS or an equivalent TDH approved course at the time of re-designation

At the time of re-designation as a Basic Trauma Facility, all physicians providing emergency room coverage should hold current credentialing in ATLS. This is a three year designation.

c. Physician on-call schedule must be published

The schedule of on-call physicians should be posted and immediately available to all staff (nursing and clerical) working in the emergency room.

3. Nursing Services

a. An identified Trauma Nurse Coordinator with overall management responsibility for the trauma program - the nursing functions of trauma coordination may be delineated in other positions within the organization

The responsibilities of this role may be an assumed by an individual currently filling another role in the organization. The hospital's director of nurses or emergency room nurse manager might hold this position.

b. A defined job description and organizational chart delineating the Trauma Nurse Coordinator's role and responsibilities -the nursing functions of trauma coordination may be delineated in other positions within the organization

The role of the trauma nurse coordinator should be described in a written job description. The organizational chart serves to define how the position of trauma nurse coordinator is

integrated into the hospital organization and identifies the lines of authority and responsibility of that role.

c. Written standards on nursing care for trauma patients in all areas of the trauma facility are to be documented

Standards of care for trauma patients should be established and should guide all nursing care provided to the patient. These standards should reflect nationally recognized standards for trauma care.

d. All nurses caring for trauma patients have documented knowledge and skill in trauma nursing to include pediatric and burn patients (i.e. trauma specific orientation, skills checklist, continuing education, etc.)

An organized, trauma related, orientation should be in place for nurses assigned to the emergency room, including a skills checklist. Staff attendance at trauma related continuing education presentations should be documented. A credentialing mechanism to demonstrate maintenance of specific skills related to trauma patient care is encouraged.

e. At least one member of the registered nursing staff has successfully completed an Advanced Cardiac Life Support (ACLS) course, or hospital equivalent, a nationally recognized pediatric advanced life support course [i.e. Pediatric Advanced Life Support (PALS)], and the Trauma Nurse Core Curriculum (TNCC) within 12-18 months of the date of designation

A member of the nursing staff must hold current credentials in ACLS, TNCC and a pediatric advanced life support course (PALS, ENPC or PPPC are all acceptable). These credentials may be held by a single individual, or by two or three staff members, however, those holding the credentials should be active in caring for trauma patients.

4. Operative Suite/Postanesthesia Recovery Room

(a surgical intensive care unit is an acceptable substitute for postanesthesia recovery)

a. If operative/postanesthesia services are provided by the facility, the on-call staff will be available in-house within thirty minutes of request 24 hours a day (this capability should be monitored in the quality improvement program)

*Operative/postanesthesia services are **not** required in a Basic Trauma Facility. However, if these services are available on-call for trauma, the timing identified in the criteria must be met and monitored in the QI program.*

b. Equipment - special requirements shall include but not be limited to:

1) Thermal control equipment:
   a) for patient

A mechanical patient warming device (such as a K-pad, or warming lamp) is the preferred equipment for patient warming. Blankets, preferably warmed blankets, are also acceptable.

b) for blood and fluids

A mechanical blood warming apparatus is preferred equipment in the warming of intravenous solutions and blood products during infusion. A tubing coil and warm water bath will meet this criteria, as long as the process is monitored through the QI program.

2) Monitoring and resuscitative equipment

An electronic monitoring device with the capability of monitoring heart rate and respiratory rate, and a defibrillator equipped with pediatric and adult paddles should be available in the operative suite and postanesthesia recovery area. Oxygen masks, nasal cannulas, bag-valve-masks, laryngoscopes, endotracheal tubes, Magill forceps, and endotracheal tube stylets in sizes for all ages (from neonates to large adults) should be stocked in these areas, as well.

3) Standard operative/postanesthesia recovery equipment

Sterile surgical trays, supplies and equipment routinely available in operative and postanesthesia areas should be available.

c. Support Services - Clinical diagnostic services (blood gases, hematocrit and chest x-rays) should be available within thirty minutes of request (this capability should be monitored in the quality improvement program)

Crucial diagnostic services, including blood gas and hematocrit testing and the performance of chest xrays should be available to operative and postanesthesia recovery patients within thirty minutes of request and the timing of these activities should be monitored through the QI process.

5. Quality Improvement

a. An organized quality improvement program, to include trauma indicators

An organized quality improvement program, in which trauma indicators have been developed and are monitored on an ongoing basis, should be implemented. This function may be performed by the hospital quality assurance/improvement coordinator who works closely with the trauma nurse coordinator and physician director of the emergency room. The QI program should also include the monitoring of documentation of patient care in the medical record, the audit of trauma charts for completeness of care and ongoing mortality

and morbidity review, including all trauma deaths. Multidisciplinary trauma conferences are encouraged, but are not an essential QI activity.

1) Systematic documentation of trauma care which meets state trauma registry guidelines

Guidelines should be in place which facilitate organized, thorough documentation of the care provided to trauma patients. This documentation should include the information identified in the "Texas Hospital Standard Data Set".

2) Audit of trauma charts for completeness of care

The medical records of all trauma patients should be audited to assure that appropriate, complete care was delivered according to identified standards of care. Any issues identified in the audit process should be addressed through the QI program.

3) Morbidity and mortality review, to include all trauma deaths

Trauma patients, especially all trauma deaths, should be included in the hospital morbidity and mortality review process.

b. Trauma registry - data will be forwarded to the state trauma registry

The hospital should be collecting data in a facility or regional trauma registry, including the components of the "Texas Hospital Standard Data Set". The data included in the "Texas Hospital Standard Data Set" should be forwarded to the state trauma registry on an ongoing basis.

6. Regional Trauma System

Hospital must participate in the regional trauma system

Representatives of the hospital should be attending the Regional Advisory Council (RAC) meetings of their Trauma Service Area. They should also be participating in RAC committees, as appropriate, to assist in the development of the regional trauma system and regional trauma system plan.

7. Transfer Agreements

Hospital must have transfer agreements for patients needing higher level of, or specialty, care (i.e. surgery, burns, etc.)

Written transfer agreements with all facilities to whom patients are transferred, signed by

both parties, are preferred. Verbal agreements with these facilities will fulfill the criteria.

8. Public Education

Injury prevention in the home, in industry, in athletics and on the highways; standard first aid; problems confronting the public, medical profession and hospitals regarding optimal care for the injured. Participation in a regional program is acceptable.

The hospital should be participating in activities which provide education and information to the public in relation to trauma. CPR classes, babysitter classes, bicycle helmet or safety restraint awareness and/or education and presentations on trauma system development and the Regional Advisory Council (RAC) are a few examples of acceptable activities. Participation in RAC sponsored activities may fulfill the criteria.

9. Training Programs

Formal training programs in trauma continuing education will be made available by the hospital to physicians, nurses and allied health personnel based on needs identified from the quality improvement program

Educational opportunities should be made available to all levels of staff (i.e. physicians, nurses, ancillary staff) by the hospital based on needs identified in the trauma QI program.